Appln. No.: 10/534,239

Amendment Dated July 5, 2007

Reply to Office Action of April 5, 2007

<u>Amendments to the Claims:</u> This listing of claims is provided solely as a courtesy to the Examiner. No amendment to the claims has been made in this Response.

## **Listing of Claims:**

- 1. (Previously Presented) A process for the production of hydrocarbons comprising:
  - a) subjecting a hydrocarbon feedstock to steam reforming by
    - i) dividing the feedstock into first and second streams,
    - ii) mixing the first stream with steam, passing the mixture of the first stream and steam over a catalyst disposed in heated tubes in a heat exchange reformer to form a primary reformed gas,
    - forming a secondary reformer feed stream comprising the primary reformed gas and the second hydrocarbon stream,
    - iv) partially combusting the secondary reformer feed stream with an oxygencontaining gas and bringing a resultant partially combusted gas towards equilibrium over a secondary reform catalyst to form a resultant secondary reformed gas, and
    - v) using the resultant secondary reformed gas to heat the tubes of the heat exchange reformer, thereby producing a partially cooled reformed gas,
  - b) further cooling the partially cooled reformed gas to below the dew point of the steam therein to condense water and separating condensed water to give a dewatered synthesis gas,
  - synthesising hydrocarbons from said de-watered synthesis gas by the Fischer-Tropsch reaction and separating at least some of the synthesised hydrocarbons, to give a tail gas, and
  - d) incorporating at least part of said tail gas into the secondary reformer feed stream before the partial combustion of thereof.

Appln. No.: 10/534,239

Amendment Dated July 5, 2007

Reply to Office Action of April 5, 2007

2. (Original) A process according to claim 1 wherein the second hydrocarbon stream comprises between 5 and 50% by volume of the hydrocarbon feedstock.

- 3. (Previously Presented) A process according to claim 1 wherein carbon dioxide is separated from the synthesis gas prior to synthesis of the hydrocarbons and is added to the secondary reformer feed stream before the partial combustion thereof.
- 4. (Original) A process according to claim 3 wherein the tail gas and second hydrocarbon stream are combined and added to the primary reformed gas separately from the separated carbon dioxide.
- 5. (Previously Presented) A process according to claim 1 wherein the de-watered synthesis gas is subjected to a step of hydrogen separation before it is passed to the Fischer-Tropsch hydrocarbon synthesis stage.
- 6. (Previously Presented) A process according to claim 1 wherein the catalyst disposed in heated tubes in the heat exchange reformer comprises a nickel catalyst and/or a precious metal catalyst.